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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/859,563	05/16/2001	Scott Harris Bloom	AIRFIBE.002A	4115

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EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 05/12/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/859,563

Applicant(s)

BLOOM ET AL.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28, 29 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 9, 13-20 and 30 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 8, 10-12 and 21-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4, 5</u> . | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 20 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 20, it recites the limitation "the positioning system" in line 5. There is insufficient antecedent basis for this limitation in the claim.

As to claim 30, it recites the limitation "the GPS receivers" in line 1, and "the positional and bearing information" in line 2. There are insufficient antecedent basis for these limitations in the claim.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-6, 9, and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendenhall (US Patent No: 6,590,685).

Regarding claims 1 and 20, Mendenhall teaches a node (100, fig. 2) for use in a wireless telecommunication network (col. 1, lines 57-66, col. 2, lines 1-4), comprising: a position determination device (50, figs. 3, 4 and 60, 96, fig. 4 and col. 4, lines 10-20, col. 5, lines 1-10, 34-37); a tiltmeter (col. 7, lines 61-67, col. 8, lines 1-6, 17-30 and 310, fig. 7); one azimuth plate (col. 8, lines 7-15 and 100, fig. 2 and 156, fig. 6); and an optical

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receiver (93, fig. 4)/transmitter pair (119, fig. 4) mounted on the azimuth plate (12, fig. 2 and 50, fig. 3). Mendenhall differs from the claimed invention in that Mendenhall does not specifically disclose a base mount to removably receive the position determining device and the tiltmeter, and a post to align the azimuth plate with the base mount.

Mendenhall teaches an optic assembly 50 with a mounting structure (figs. 2, 3), wherein it includes a position determining device (60, 80, fig. 4) and a tiltmeter (92, 96, fig. 4 and col. 4, lines 58-61). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that an optical assembly such as the optic assembly 50 of Mendenhall comprises of a base mount to receive the position determining device and the tiltmeter in order to provide the approximate positioning information of the opposing terminal, and a post to align the azimuth plate with the base mount in order to provide an optical assembly that can be used for beam acquisition and tracking.

Regarding claim 5, Mendenhall teaches a conduit for transmitting signals to the transmitter/receiver pair (for example, fibers 93 and 119, fig. 3).

Regarding claim 6, as to precisely aligning the position determining device and the tiltmeter to a post, this is merely a matter of engineering and design choice, and it would have been obvious to precisely align a position determining device and a tiltmeter to a post to accurately determine positioning information and to provide beam acquisition and tracking.

Regarding claim 9, Mendenhall teaches a radome and a lid (col. 2, lines 20-22) surrounding the optical receiver/transmitter pair (12, fig. 2 and 50, fig. 3).

Regarding claim 13, Mendenhall teaches the azimuth plate comprises an azimuth stepper motor to adjust the azimuth pointing direction (156, fig. 6 and col. 6, lines 10-15).

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Regarding claims 14-18, Mendenhall teaches the azimuth plate comprises an elevation stepper motor to adjust the elevation pointing direction of the transmitter/receiver pair (col. 6, lines 16-41).

Regarding claim 19, Mendenhall teaches a memory device to store data that accounts for offsets in the actual pointing direction of the transmitter/receiver pair relative to a design pointing direction (col. 6, lines 45-64 and 200, fig. 3).

5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendenhall (US Patent No: 6,590,685) in view of Lee et al. (US Patent No: 5,405,347).

Regarding claims 2-3, Mendenhall differs from the claimed invention in that Mendenhall does not disclose a post that includes a V-groove to receive a set screw that aligns an azimuth plate with a base mount. Lee teaches a post that includes a V-groove to receive a set screw (col. 3, lines 17-30). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a post with V-groove and screws, as it is taught by Lee, for the optical acquisition and tracking assembly of Mendenhall in order to provide slidable relationship between different portions and to allow coupling, sliding, and angular movement between parts of the system.

6. Claim 1 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayeux (US Patent No: 5,390,040).

Regarding claims 1 and 20, Mayeux teaches a node for use in a wireless telecommunication network (col. 1, lines 7-12), comprising: a base mount (col. 4, lines

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1-3, the base mount that actuators 12 and steering mirror assembly is connected thereto) configured to removably receive a position determination device (col. 4, lines 3-8 and 12, figs. 1, 2, note that actuators 12 determine the position of steering mirror 10) and a tiltmeter (col. 4, lines 9-11 and 10, fig. 1, note that steering mirror 10 can function as a tiltmeter since the received and transmitted optical signals can be reflected, or tilted, when the mirror is controlled by the actuators 12); at least one azimuth plate (the azimuth plate that laser diode 50, and photodiodes 30, 32 are connected thereto); an optical receiver (30, fig. 2)/transmitter pair (50, fig. 1, 2) mounted on the azimuth plate (the plate that receiver/transmitter pair is mounted thereto). Mayeux differs from the claimed invention in that Mayeux does not specifically disclose a post, wherein the azimuth plate is rotatably mounted on the post and the post is configured to align the azimuth plate with the base mount. Mayeux teaches an optic assembly (50, 30, 32, figs. 1, 2) with a mounting structure, as it is shown in fig. 1. It would have been obvious to a person of ordinary skill in the art at the time of invention that an optical assembly such as the one of Mayeux comprises of a post to receive various parts or components of the system such as the azimuth, or steering mirror, or optical elements in order to provide an optical transceiver that can be used for beam pointing, acquisition, and tracking.

7. Claims 4, 7-8, 10-12, and 21-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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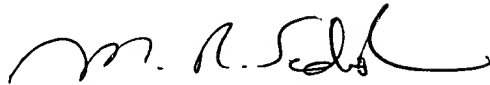
8. Claim 30 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. Claims 28-29 and 31 are allowed over prior art of record.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


M.R. SEDIGHIAN
Patent Examiner
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